UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,301	05/07/2001	Mark A. Terribile	1	2198

7590 09/08/2004	EXAMINER
Docket Administrator (Room 3C-512)	LIEN, TAN

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ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/850,301	TERRIBILE, MARK A.
	Examiner	Art Unit
	Tan Lien	2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on <u>07 May 2001</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-36</u> is/are rejected.

7) ☒ Claim(s) <u>26</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>07 May 2001</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTIONS

Claim Objections

Claim 26 is objected to because of the following informalities:

Claim 26: The variable "m/q" is not introduced anywhere. The "m" should be "n" and variable "m/q" is changed to "n/q".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peercy et al (US Patent 5,960,429) in view of Doyle (US PGPub 2002/0099807).

Claim(s) 1, 2, 3, 5, 6, 7, 9, 10: Peercy teaches a method for building a table having n entries to select r most frequently used Internet site names from m Internet site names that can be received at a resource delivery site, so that the resource delivery site can cache the corresponding resources from the r most frequently used Internet sites in advance where r <= n, the method comprising the steps of:

(a) receiving an Internet site name from a packet (col. 2, lines 19-25);

(b) storing the Internet site name (FIG. 2, ref. 28; wherein the Internet site name is in the form of URL) in an entry of the table (FIG. 2, ref. 28 & 30; wherein the table has name field and a count field) if the Internet site name is not in the table (FIG. 2, ref. 24); and

(c) counting the number of times the Internet site name has been received (FIG. 2, ref. 30), characterized in that $m > n$.

Peercy, however, fails to teach that if the Internet site name is new and the table is full, replace one of the q least frequently used entries according to the value of the count field of each entry.

Doyle, in an analogous art, teaches replacing an entry in the cache according to the least recently or least frequently accessed by the user (paragraph [0026], last couple sentences). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine and include Doyle's step of replacing one of the least frequently accessed entries with Peercy's method of building a table of most frequently used Internet sites, for the advantage of cost saving. Peercy's method would save caching space, which in turn would reduce cost. (paragraph [0026]).

Claim(s) 4, 15: Peercy and Doyle teach the method of claim 3 further comprising

the step of retrieving r most frequently used Internet site names according to the

value of the count field of each entry (col. 4, lines 40-44 Peercy).

Claim(s) 8: Peercy and Doyle teach the apparatus of claim 6, wherein

if the table is full and the Internet site name is not in the table, the processor

randomly selects one of the q least frequently used entries for replacement

(Peercy and Doyle teach selecting the least frequently used entry of the q least

frequently used entries. In a similar fashion, randomly selecting one of the least

frequently used entries is well known in the art at the time of the invention, so

Official Notice is taken).

Claim(s) 11: Peercy and Doyle teach the apparatus of claim 10, wherein

if the Internet site name is in one of the entries, the processor increments the

value of the count field (col. 4, lines 35-37 Peercy).

Claim(s) 12: Peercy and Doyle teach the apparatus of claim 11, wherein

the processor sorts the entries in the table into an order according to the value of

the count field of each entry (col. 4, lines 44-47).

Claim(s) 13: Peercy and Doyle teach the apparatus of claim 12, wherein

the order is descending, whereby the r most frequently used Internet site names

are in the first r entries (col. 4, lines 44-47; wherein the sorted list is in order of

most popularity to least popularity).

Claim(s) 14: Peercy and Doyle teach the apparatus of claim 12, wherein

the sort is a bubble sort method (Sorting numbers according to the bubble sort is

well known in the art at the time of the invention, so Official Notice is taken).

Claims 16-20, 22-31 and 33-36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Peercy et al in view of Blitz (US Patent 6,047,293) and Doyle.

Claim(s) 16, 17, 25, 27, 28, 36: Peercy teaches an apparatus for building a table to

select r most frequently used Internet site names in a resource delivery site, so that the

resource delivery site can cache the corresponding resources from the r most frequently

used Internet sites in advance, the apparatus comprising:

a receiver for receiving an Internet site name (col. 2, lines 19-25, and col. 4, lines

35-36; wherein the Internet site name is in the form of a URL); and

a memory for storing the table having n entries where $n >= r$ (FIG. 2, ref. 24),

each entry in the table comprising a name field for the Internet site name (FIG. 2,

ref. 28) and a count field for counting the number of times the Internet site name

is received (FIG. 2, ref. 30)

Peercy, however, fails to teach a processor for converting the Internet site name

into a number and storing the number into an entry in the table comprising a

number field for the number, characterized in that if the table is full and the

number is not in the table, the processor replaces one of the q least frequently

used entries according to the value of the count field of each entry, where $q < n$.

Blitz, in an analogous art, teaches a processor for converting the names into

numbers for quick indexing in a table and searching device names (col. 7, lines

38-40). It would have been obvious to one of ordinary skill in the art at the time

of the invention to modify Peercy's table with the name "title" field with Blitz's

converted numbers in the number field, for the advantage of uniquely indexing

the entries in the table for quick search (col. 7, lines 32-34 Blitz).

Doyle, in another analogous art, teaches a processor for determining if the cache

is full, the processor replaces an entry in the cache according to the least

recently or least frequently accessed by the user (paragraph [0026], last couple

sentences). It would have been obvious to one of ordinary skill in the art at the

time of the invention to combine and include Doyle's step of replacing one of the

least frequently accessed entries with Peercy's method of building a table of

most frequently used Internet sites, for the advantage of cost saving. Peercy's

method would save caching space, which in turn would reduce cost. (paragraph
[0026]).

Claim(s) 18, 29: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

if the number is in one of the entries, the processor increments the value of the

count field (col. 4, lines 35-36 Peercy).

Claim(s) 19, 30: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

the processor retrieves the r most frequently used Internet site names from the

top r entries according to the value of the count field of each entry (col. 4, lines

40-45 Peercy).

Claim(s) 20, 31: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

the processor sorts the entries in the table into an order according to the value of

the count field of each entry (col. 4, lines 45-46 Peercy).

Claim(s) 22, 33: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

if the number is not in the table and the table is not full, the processor stores the

number and the Internet site name in the respective fields of an empty entry (col.

4, lines 30-40; wherein when the database table was first created, the number is

not in the table and the table is not full, and the entry was stored in the empty

entry).

Claim(s) 23, 34: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

if the number is in an entry and the value of the count field of that entry is greater

than a threshold, the processor stores the Internet site name in that entry (col. 4,

lines 50-55).

Claim(s) 24, 35: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

if the table is full and the number is not in the table, the processor randomly

selects one of the q least frequently used entries for replacement (Peercy, Blitz

and Doyle teach selecting the least frequently used entry of the q least frequently

used entries. In a similar fashion, randomly selecting one of the least frequently

used entries is well known in the art at the time of the invention, so Official Notice

is taken).

Claim(s) 26: Peercy, Blitz and Doyle teach the apparatus of claim 16 wherein

the table comprises q sub-tables where n>q>1, each sub-table has n/q entries

and pointed to by an address ranging from 0 to q-1, the number is searched or

stored in the sub-table pointed to by the address produced by taking a modulo

operation on the number by q (It is well known in the art at the time of the

invention that if one table has too many entries than breaking the entries into

several different tables with primary key and foreign key linking the tables would

add efficiency to searching in database theory. Furthermore, the modulo

operation is also well known in the art at the time of the invention),

if the sub-table is full and the number is not in the sub-table, the processor

replaces one of the bottom n/q entries according to the value of the count field of

each entry (paragraph [0026], last couple sentences of Doyle), and

retrieves the r most frequently used Internet site names from the top r entries

among the q sub-tables according to the value of the count field of each entry

(col. 4, lines 40-45 Peercy).

Claims 21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Peercy in view of Blitz, Doyle, and Jones et al (US Patent 6,134,603).

Claim(s) 21, 32: Peercy, Blitz and Doyle teach the apparatus of claim 16, but fail to

teach

the processor uses a hash function for the conversion.

Jones, in an analogous art, teaches a hashing function to associate the hash

value to the remote object method. It is converting the hash value to the remote

object method. It would have been obvious to one of ordinary skill at the time of

the invention to combine and include Jones' hashing function with Peercy's

apparatus of building a table to associate hash values to an Internet site names,

for the advantage of quick and efficient mapping of numbers to names.

Conclusion

Any inquiry concerning this communication or earlier communications from the
Examiner should be directed to Tan Lien whose telephone number is (703) 305-
6018. The examiner can normally be reached on Monday-Thursday from 8:30am to
6pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Rupal Dharia, can be reached at (703) 305-4003. The fax phone
number for this Group is (703) 305-3718.

Communications via Internet e-mail regarding this application, other than those
under 35 U.S.C. 132 or which otherwise require a signature, may be used by the
applicant and should be addressed to [tan.lien@uspto.gov].

All Internet e-mail communications will be made of record in the application file.
PTO employees do not engage in Internet communications where there exists a
possibility that sensitive information could be identified or exchanged unless the
record includes a properly signed express waiver of the confidentiality requirements
of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy
published in the Official Gazette of the Patent and Trademark on February 25, 1997
at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Group receptionist whose telephone number is
(703) 305-3900.

Tan Lien   Paul H. Kang

Patent Examiner   **Primary Examiner**